

M e m o r a n d u m

To : Tony Harris
Chief Deputy Director
System Performance

Date : July 19, 1999

From : Arlon Sauls
District Division Chief
Maintenance & Operations
District 9 - Bishop

Subject : Request for Consultation and Guidance

I am currently acting on behalf of District Director Hallenbeck, who is on vacation. We have received a request from the California Energy Commission concerning a risk assessment on State Route 127, which is in District 9 and District 8. California and Nevada are in negotiations with the U. S. Department of Energy concerning the selection of a route for the transportation of low-level radioactive waste to the Nevada Test Site. I have attached an issue paper, along with a copy of the email that originated the request.

Due to the potential political ramifications (we have copies of letters from Senators Boxer and Feinstein, and from Congressmen Lewis and Farr opposing the use of a California route), we have asked that a formal request for this risk assessment be sent to Director Medina.

Members of my staff and I would like to arrange a conference call with you to set the direction to best handle this issue. Because of meeting commitments a call on Wednesday would be preferable. Please contact me through Director Hallenbeck's office, or directly at (760) 872-0670 to arrange this call.

cc: Katy Walton, District Division Chief, Planning
and Public Transportation

State Route 127 Risk Analysis

Low-level Radioactive Waste Transportation

Issue:

We have received a request (attached) from Barbara Byron, California Energy Commission, to prepare a risk analysis of California State Route 127. The Department of Energy (DOE) is considering use of SR127 for the transport of low-level radioactive waste to the Nevada Test Site.

Background:

The Nevada Test Site (NTS) in Southern Nevada has been used for the disposal of low-level radioactive wastes and mixed wastes generated by the weapons program since the early 1960's. Shipments to the NTS have historically been by truck, with the routing determined by the carrier in conformance with 49 CFR 397.101 (Routing of Class 7 [Radioactive] Materials). The routes used have generally passed through Las Vegas, Nevada along I15 and US95. In September 1998 the DOE issued an Environmental Assessment on a proposal to ship wastes by rail to an intermodal transfer facility, with truck transportation as the final leg of the journey. Included as part of the proposal was the avoidance of the Las Vegas Valley. Some of the alternatives include the use of an intermodal transfer site in California (at Barstow or Yermo) and the use of SR127 for the final leg of the journey. The all-truck alternatives in this Environmental Assessment also avoid the Las Vegas Valley and make use of SR127 as an alternative.

Concerned that they would soon become a major pathway for low-level radioactive waste to the NTS, and that this might set a precedent for future high-level radioactive waste shipments to Yucca Mountain, Inyo and San Bernardino Counties contacted their congressional delegations. Senators Feinstein and Boxer, and Congressmen Jerry Lewis (Chairman, California Republican Congressional Delegation) and Sam Farr (Chairman, California Democrat Congressional Delegation) sent joint letters to Secretary of Energy Bill Richardson supporting the counties' argument that shipping radioactive waste from the east into California for a destination in Nevada made little sense.

Under California Government Code, the California Highway Patrol (CHP) is the hazardous materials routing authority for the state. In the case of highway route controlled quantities (HRCQ), the CHP has designated preferred routes, that include I15 to Nevada, but do not include SR127. The low-level radioactive waste shipments under consideration are not HRCQ, and the carrier is not constrained from using SR127. However, the carrier must meet the requirements of 49 CFR 397.101, which states that the carrier shall:

Ensure that the motor vehicle is operated on routes that minimize radiological risk; and

Consider available information on accident rates, transit time, population density and activities, and the time of day and the day of week during which transportation will occur to determine the level of radiological risk.

On May 4, 1999 the DOE met with representatives of the California Energy Commission, the California Highway Patrol, the California Office of Emergency Services, the Nevada Nuclear Waste Project Office, the Nevada Department of Transportation and Inyo County. Nevada maintained that shipments could not travel through the Las Vegas Valley, and discussion focused on the use of either SR127 or Nevada SR160 (which leaves I15 in Nevada south of Las Vegas and passes through Pahrump on the way to US95)[see attached maps]. As an outcome of that meeting, California agreed to prepare a risk analysis for SR 127, and Nevada agreed to prepare a risk analysis for SR160. Ms. Byron assumed the CHP was preparing the analysis but, as her email indicates, the CHP has declined.

The analyses for these two routes will be used during discussions at an October Western Governor's Association Meeting to attempt to resolve this impasse. In the interim, carriers have been directed to use a northern route that enters Nevada at Wendover, or an alternative route that enters Nevada at Mesquite. Both routes avoid the Las Vegas Valley, but both will experience adverse winter weather conditions, and neither is as direct as the two southern routes.

Description of the Task

The risk analysis will need to include both the standard factors for transportation risk such as accident rates, roadway geometrics, and traffic, but special factors exclusive to the transport of hazardous materials. The Department of Transportation *Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials*¹ lists the following primary and secondary factors for use when comparing routes:

Primary Factors

- Radiation exposure from normal transport
- Public health risk from accidental release of radioactive materials
- Economic risk from accidental release of radioactive materials

Secondary Factors

- Emergency response effectiveness
- Evacuation capabilities
- Location of special facilities such as schools or hospitals
- Traffic fatalities and injuries unrelated to the radioactive nature of the cargo

For District 9 Planning to prepare this risk analysis in the requested time frame (completion by October 1999), significant resources will need to be redirected or assigned. The development of the required data will require close cooperation with District 8, and with Inyo and San Bernardino Counties. The radiologic risk assessment may require support from resources at Headquarters with the appropriate expertise to conduct this type of analysis.

Recommendation

District 9 Planning would be the lead unit in conducting a risk analysis of the transportation of low-level radioactive waste on State Route 127. We ask that this request be given high priority, and that staff resources in an estimated amount of 1.5 PY be assigned, along with O & E funds for travel (including potential out of state) and other expenses. The table below shows our estimate of the PY resources that will need to be redirected or assigned.

<u>Participant</u>	<u>Tasks</u>	<u>PY Estimate</u>
District 9 Planning	Gather D9 data, perform modeling and radiologic analysis, prepare report, interact with external parties	.75
District 8 Planning	Gather D8 data, review report and analysis	.50
Headquarters	Provide technical expertise in modeling and risk analysis, review report and analysis	.25

¹ Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials, August 1992, DOT/RSPA/HMS/92-02



"Barbara Byron" <Bbyron@energy.state.ca.us> on 07/06/99 12:50:24 PM

To: Brad Mettam/D09/Caltrans/CAGov
cc: Dnix@energy.state.ca.us, MPlanka@POHCQO
Subject: CA SR 127 Risk Assessment.

Dear Brad,

As you know, on June 3 staff from the Western Governors' Association (WGA) and DOE (including DOE-Headquarters, DOE-Nevada and DOE-Fernald) met in San Diego with states (CA, NV, UT, AR) to discuss routing issues regarding the U.S. Department of Energy's (DOE) low-level nuclear waste (LLW) shipments to the Nevada Test Site (NTS). The large number of shipments (about 800 per year) and the possible precedent these shipments may set for routing future DOE nuclear waste shipments has raised public concern about the routes being considered.

The purpose of the June 3 meeting was to identify routing issues related to the shipment of LLW to NTS and to suggest a path forward toward resolution of these issues. As you know, controversy developed following DOE's proposal to reroute through California LLW shipments from eastern states to NTS to avoid transport through Las Vegas and over Hoover Dam. The Governors of Nevada and Arizona, as well as U.S. Senators from Nevada, have requested that DOE avoid LLW shipments over Hoover Dam and through Las Vegas. The alternative routes DOE is considering include the use of CA SR 127, and shipments through Needles, Barstow and/or Baker, California. These communities as well as the counties of San Bernardino and Inyo oppose rerouting these shipments through California. Similarly, Senators Feinstein and Boxer, as well as the Chairmen of the California Congressional Delegation (Congressmen Farr and Lewis), oppose the use of SR 127 for these shipments.

After a lengthy discussion at the June 3 meeting regarding routing issues, it was decided that California and Nevada would conduct risk analyses of CA SR 127 and NV SR 160 to provide input into future routing decisions. These risk analyses (California's analysis of CA SR 127 and Nevada's analysis of NV SR 160) would be based upon the Transportation External Coordination (TEC) Group's Routing Paper called "Routing Transportation: Discussion and Recommendations". These evaluations would be prepared in time for use and discussion at the next Western Governors' Association (WGA) WIPP Transport meeting in October in San Diego.

The California Highway Patrol does not have the capability to do a physical assessment of CA SR 127 and they suggest that either Caltrans or Inyo County would be better suited to complete such an assessment. Please see the attached message from the CHP. Caltrans' Route Concept Report on State Route 127, completed in 1997, could be used in this analysis. Would Caltrans, with input from Inyo County, be able to complete such an analysis of CA SR 127?

The TEC routing paper is available at the following website:

www.uetc.org/tec/Routing%20Paper.PDF or we can fax it to you (20 pages).

WGA and DOE are expecting California and Nevada to have their risk assessments for CA SR 127 and NV SR 160 ready for use at the October WGA meeting. I am concerned that if California does not prepare such an analysis, only the technical information from Nevada on SR 160 will be available for routing decisions. DOE has said that unless there are any "show-stoppers" revealed in California's and Nevada's studies of CA SR

127 and NV SR 160, DOE may include both of these routes in their proposed routes for LLW shipments to NTS. DOE would spread the 800 per year shipments over a variety of routes, rather than concentrating shipments on one or two routes.

DOE said that the initial Fernald shipments to NTS, which resumed over a week ago, will use the northern route and will not impact California.

Please let me know if Caltrans would be able to complete such an evaluation of SR 127 by October. If you have any questions, I can be reached at 916-654-4976. Thank you.

Barbara

Received: from tdc-rap.energy.state.ca.us ([10.40.7.1]) by energy.state.ca.us;
Fri, 02 Jul 1999 11:10:35 -0700
Received: from door.chp.ca.gov ([168.145.1.225]) by tdc-rap.energy.state.ca.us
via smtpd (for energy.state.ca.us [10.40.7.2]) with SMTP; 2 Jul 1999 18:08:34 UT
Received: from DOCHP-Message_Server by hqd8.chp.ca.gov with Novell_GroupWise;
Fri, 02 Jul 1999 11:06:42 -0700
Message-Id: <s77c9d42.056@hqd8.chp.ca.gov>
X-Mailer: Novell GroupWise 5.5
Date: Fri, 02 Jul 1999 11:03:20 -0700
From: "Meg Planka" <POHQC0.MPlanka@chp.ca.gov>
To: <Bbyron@energy.state.ca.us>
Subject: Re: Status of the CA SR 127 Risk Assessment.
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: quoted-printable
Content-Disposition: inline

Barabara

I spoke to both Pat White and Lt. Abrames, and they both were unaware of a request to do an assessment on SR 127. The CHP does not have the capability to do any physical assessments on this roadway and this could probably be done better by Caltrans.

Meg

>>> "Barbara Byron" <Bbyron@energy.state.ca.us> 06/25/99 02:20PM >>>
Dear Meg and Pat,

What is the status of the proposed risk assessment of CA SR 127 for low-level waste shipments to the Nevada Test Site? This study was mentioned at our meeting in San Diego with WGA, other states, and DOE. It was suggested that both California (SR 127) and Nevada (SR 160) would evaluate these routes in time for the October WGA meeting in San Diego.

We have been told that unless there are any "show-stoppers" revealed in California's and Nevada's studies of CA SR 127 or NV SR 160 in Nevada, DOE may include these routes in their shipments of low-level-waste shipments to NTS. They are proposing to spread the shipments over a variety of routes, rather than concentrating on one or two routes.

Please let me know whether the CHP is going to be able to complete this risk analysis. Thanks.--Barbara

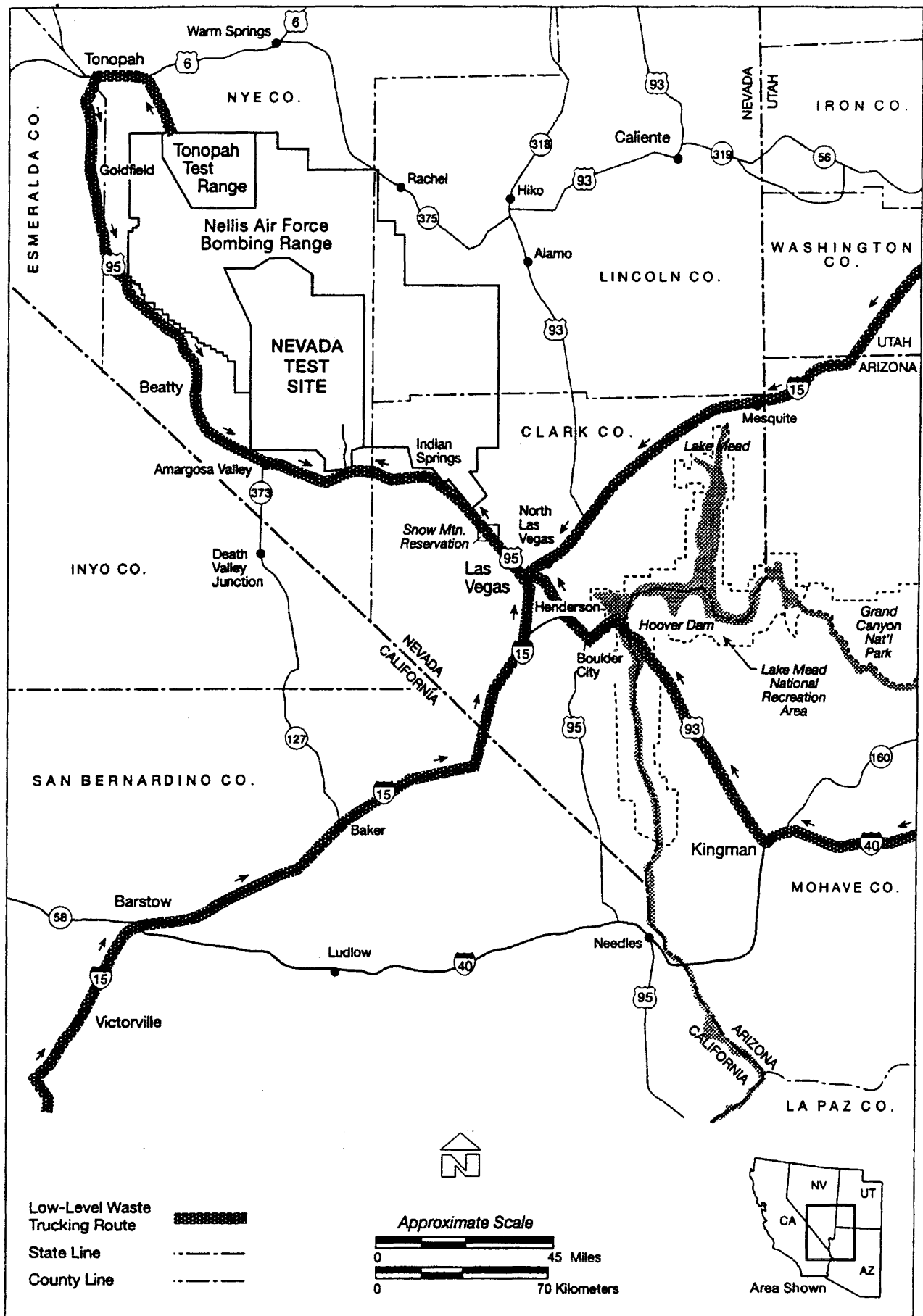


Figure 2-2. Current Low-level Radioactive Waste Trucking Routes.

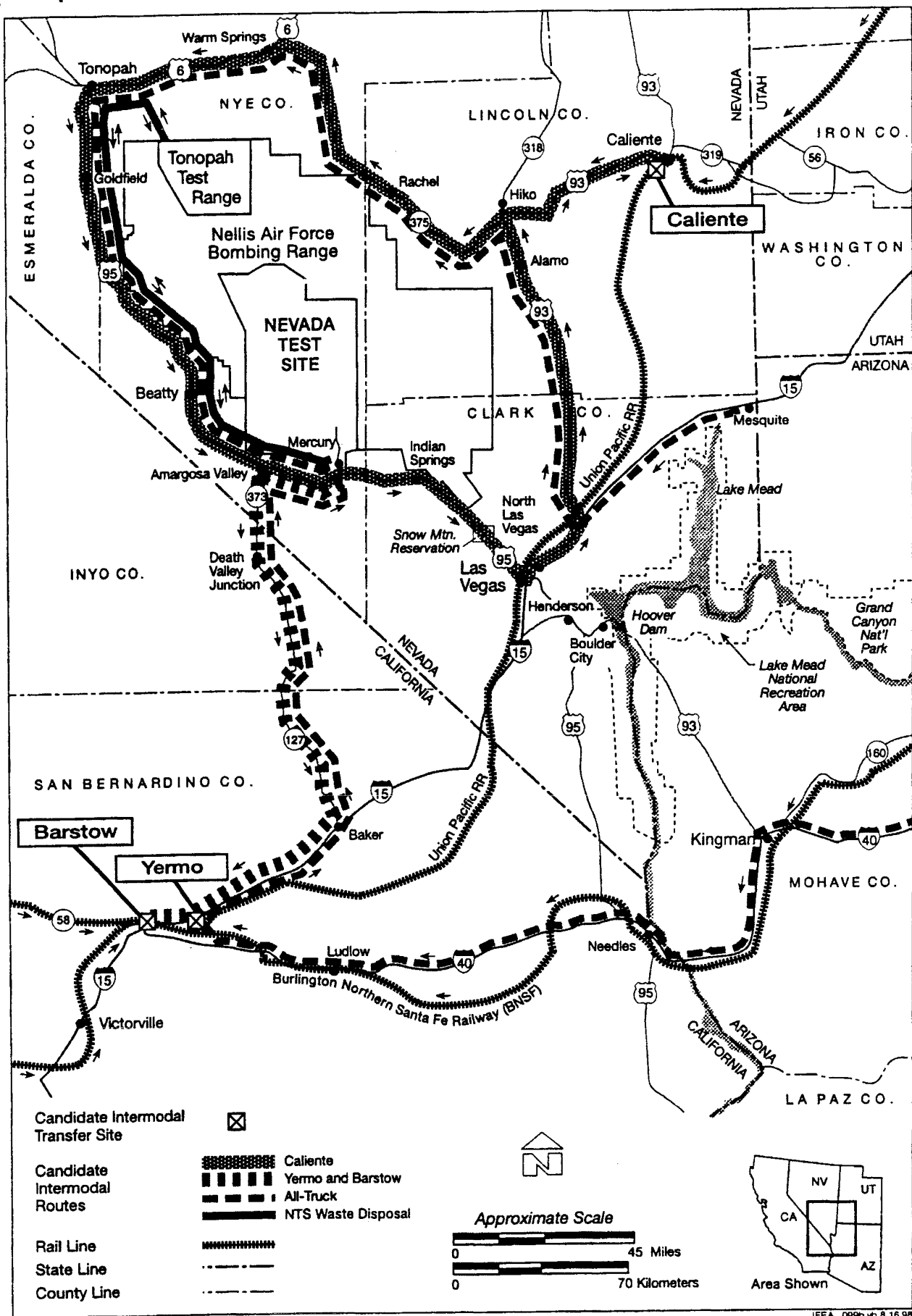


Figure 2-1. Intermodal Sites and Routes.

Congress of the United States

Washington, DC 20515

May 25, 1999

The Honorable Bill Richardson
Secretary of Energy
1000 Independence Ave., SW
Washington, DC 20585

Dear Mr. Secretary:

We are writing to express our strong opposition to the re-routing of shipments of low-level nuclear waste through the State of California for disposal at the Nevada Test Site. We have recently been made aware of consideration being given by the Nevada Operations Office of the Department of Energy to divert shipments through California utilizing State Route 127.


The Department of Energy has issued an Environmental Assessment recommending several routing options bypassing the Las Vegas metropolitan area when shipping low-level nuclear waste from defense facilities across the country for disposal at the Nevada Test Site. Potential options include utilizing the I-40 Needles-Barstow corridor and the use of State Route 127, a narrow two-lane road, either as part of intermodal (rail to truck) alternatives using Barstow or Yermo as the transfer locations or as part of all truck option. As you know, 90 percent of these waste shipments originate from defense facilities located to the East of Nevada. To consider diverting the shipments through California, adding considerable distance to the route, defies reason and common sense.

For 20 years, waste shipments have been transported safely on more direct routes utilizing the interstate highway system. Department of Transportation routing regulations governing the shipment of radioactive material support this approach over the use of other potentially unsafe roads. Further, shipments to the Nevada Waste Site require properly trained and equipped emergency personnel and equipment which are not presently available along the State Route 127 corridor. In addition, you may not be aware that the proposed route—State Route 127—is the primary access route for tourist traffic to Death Valley National Park.

Mr. Secretary, we join the City of Barstow, Inyo and San Bernardino Counties, as well as California Senators Feinstein and Boxer, in our vigorous opposition to the diversion of waste shipments through California. Please do not hesitate to contact us directly should you have any additional questions or concerns.


Jerry Lewis
Chairman, California Republican
Congressional Delegation

Sincerely,


Sam Farr
Chairman, California Democrat
Congressional Delegation

United States Senate

WASHINGTON, DC 20510

May 12, 1999

The Honorable Bill Richardson
Secretary
United States Department of Energy
1000 Independence Avenue, SW
Washington, D.C., 20585

Dear Mr. Secretary:

It has come to our attention that the Nevada Operations Office of the Department of Energy is considering re-routing shipments of low-level waste for disposal at the Nevada Test Site through California. As 90 percent of these shipments are from defense facilities to the east, we do not understand the rationale for diverting shipments into California, only then to reverse direction and proceed east to the Nevada Test Site.

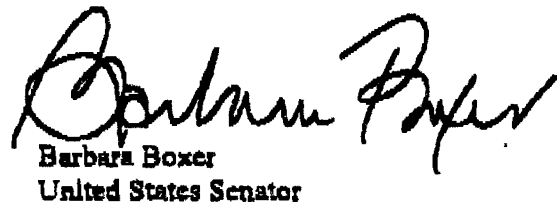
These shipments of waste have traveled safely on more direct routes for many years. There is no supportable reason for moving these transportation routes into California, or for using roads of lesser quality for these shipments. Prior shipments have used the interstate system to the greatest extent possible before using other roadways. This approach is supported by the Department of Transportation routing regulations for high and low-level radioactive materials, and has been used in the routing of thousands of Department of Energy shipments.

Both Inyo and San Bernardino Counties in California have taken positions opposing the use of routes in California, specifically, State Route 127 for these shipments. Twenty years of experience by the Department of Energy in shipping radioactive materials for disposal at the Nevada Test Site argues that the current interstate highway routes are most appropriate. We oppose the diversion of these shipments into California and especially the use of State Route 127 which is a primary access route for tourist traffic to Death Valley National Park.

Sincerely yours,



Dianne Feinstein
United States Senator



Barbara Boxer
United States Senator

Fax # ? 8-4646608

1-11-00
replied
sent to Dr.
H. J. H.